REMARKS

Claim Status

Applicants express their sincere appreciation to the Examiner, Mr. Stephen M. D Agosta, for the courtesies extended to applicants' representative during the telephone interview conducted with him on July 15, 2011, and for his acknowledged assistance in furthering prosecution on the merits of the instant application. During the telephone interview, the subject matter of independent claim 8 was discussed. No agreement with respect to patentability of the claims was reached. The within amendments and remarks memorialize and incorporate the substance of the telephone interview.

Applicants acknowledge, with appreciation, the indication that claim 14 contains allowable subject matter. Claims 8-21 are currently pending, with claims 8, 15, 16 and 21 being the only independent claims. Claims 8, 15 and 16 have been amended. Support for the amendments may be found, for example, at pg. 19, lines 12-29 and pg. 20, lines 7-29 of the specification as originally filed. New independent claim 21 has been added. No new matter has been added. Reconsideration of the application, as herein amended, is respectfully requested.

Overview of the Office Action

Claims 8-10, 13, 15 and 16 stand rejected under 35 U.S.C. §103(a) as unpatentable over U.S. Pub. No. 2003/0099196 ("*Sebire*") in view of U.S. Patent No. 7,023,835 ("*Haumont*") and U.S. Patent No. 6,668,175 ("*Almgren*").

Claims 11, 12, 17 and 19 stand rejected under 35 U.S.C. §103(a) as unpatentable over *Sebire* in view of *Haumont* and *Almgren*, and further in view of U.S. Patent No. 6,985,739 ("*Spaling*"). Claim 20 stands rejected under 35 U.S.C. §103(a) as unpatentable over *Sebire* in

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view of *Haumont* and *Almgren*, and further in view of U.S. Patent No. 6,016,311 ("*Gilbert*") and WO 02/03622 ("*Hurme*").

Applicants have carefully considered the Examiner's rejections and the comments provided in support thereof. For the following reasons, Applicants respectfully assert that all claims now presented for examination in the present application are patentable over the cited art.

Patentability of the Independent Claims under 35 U.S.C. §103(a)

Independent claim 8 has been amended to now recite, *inter alia*, the steps of "mapping, by a service node of the core network, said quality of service parameters of the core network with quality of service parameters of the radio access network, said quality of service parameters of the radio access network including the Allocation/Retention Priority quality of service parameter having a priority level sub-parameter, and said mapping determining a value of said priority level sub-parameter based on a value of the Allocation/Retention Priority quality of service parameter of the core network and a value of said quality of service parameter representative of the traffic class associated to the requested service", "sending, by the service node of the network core to the radio access network, a radio access bearer service request comprising said quality of service parameters of the radio access network", and "defining a priority level for the requested service in the radio access network by the value of the priority level sub-parameter of the Allocation/Retention Priority quality of service parameter of the radio access network. Thus, independent claim 8 now recites that the quality of service parameters of the core network include at least an Allocation Retention Priority quality of service parameter and a quality of service parameter representative of the traffic class associated to the requested service, that the quality of service parameters of the radio access network include an Allocation Retention Priority quality of

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service parameter having a priority level sub-parameter, and that the mapping between the parameters of the core network and the parameters of the radio access network is performed by a service node of the core network before being sent to the radio access network. Independent claims 15 and 16 have been correspondingly amended. Support for the amendments may be found, for example, at pg. 19, lines 12-29 and pg. 20, lines 7-29 of the specification as originally filed. No new matter has been added. The Examiner-cited art fails to teach or suggest the expressly recited subject matter of now-amended independent claims 8, 15 and 16.

Applicants' claimed invention is directed to determining, for each service request, the sub-parameter priority level of the RAB parameter "ARP" based on the value of the parameter "ARP" and on the value of a QoS parameter related to the type of service. Within the meaning and scope of the claimed invention, the value of a QoS parameter related to the type of service refers in particular to the value of the parameter "Traffic Class" of the core network (i.e. conversational, streaming, interactive, or background). Moreover, the parameters and sub-parameters recited in amended claim 8 are UMTS standardized parameters, i.e., their values or the way they are determined is fixed by the requirements of the UMTS standard.

Sebire, *Haumont* and *Almgren*, individually or in combination, <u>fail</u> to teach or suggest mapping between the quality of service parameters of the core network and the quality of service parameters of the radio access network before transmitting them in the service request. That is, *Sebire*, *Haumont* and *Almgren* <u>fail</u> to teach the step of "mapping, by a service node of the core network, said quality of service parameters of the core network with quality of service parameters of the radio access network, said quality of service parameters of the radio access network including the Allocation/Retention Priority quality of service parameter having a priority level sub-parameter, and said mapping determining a value of said priority level sub-

parameter based on a value of the Allocation/Retention Priority quality of service parameter of the core network and a value of said quality of service parameter representative of the traffic class associated to the requested service", as recited in now amended independent claim 8 and correspondingly recited in now amended independent claims 15 and 16.

Sebire discloses a method for transmitting packets across a radio access network including identifying a first part of a packet and a second part of the packet, and classifying one of the first part and the second part as being more important than the other part. The teachings of *Sebire* relate to a method for <u>managing the queuing of packets</u>. More particularly, *Sebire* describes an architecture that enables the control of the QoS at different levels (see, e.g., paragraph [0035]) and the mapping between the QoS parameters ([[0038]). There is no explanation whatsoever in *Sebire* of precisely how this mapping is achieved.

Haumont describes a method for transmitting data packets in multiple data flows to/from a mobile station in a mobile communications system, where a data transmission path is formed for routing data packets and multiple profiles are associated with the data transmission path, and where each profile comprises at least one quality of service parameter (QoS) parameter. In particular, *Haumont* (col. 5, lines 55-59) explains that "a GPRS QoS profile contains five parameters: service precedence, delay class, reliability, and mean and peak bit rates. Service precedence defines some kind of priority for the packets-belonging to a certain PDP context (i.e. which packets will be dropped in case of congestion)". *Haumont* thus teaches that a GPRS QoS profile consists of five parameters, including a "service precedence" parameter that defines a sort of priority for the packets belonging to a given PdP context. *Haumont* (col. 6, lines 1-3) also describes the mapping of the QoS profile parameters with four SAPI available on the LLC layer, with one SAPI being defined as a QoS value with 4 levels (see, e.g., col. 8 lines 4-5). The teachings of

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Haumont are directed to the <u>processing of data packets</u>, which has <u>nothing</u> to do with managing the <u>allocation of radio resources</u> in a mobile communication network. *Haumont* similarly <u>fails</u> to teach or suggest a methodology by which the mapping of independent claims 8, 15 and 16 is performed.

Almgren, for its part, discloses the processing of RAB requests to ensure a determined flow rate. *Almgren* (col. 14, lines 38-41) explains that an "RAB request may also include other attributes, including a 'cost' the user is willing to pay for this RAB. The RAB request may be assigned an allocation/retention priority value. As an example, a priority value of 2 may be treated as being more important than a priority value of 3 but less important than a priority value of 1". *Almgren* thus teaches that a RAB may contain priority information, interpreted as the price that the user is ready to pay for the RAB. As explained at col. 11 lines 55-61 of *Almgren*, this priority may be specified by the user directly during the subscription. *Almgren* also teaches that the ARP value (1, 2 or 3) can be assigned to a RAB request.

While it may be true that *Almgren* teaches the use of an allocation/retention priority, there is no teaching or suggestion <u>whatsoever</u> that the allocation/retention priority of *Almgren* be used for determining a value of the priority level sub-parameter when <u>mapping</u> quality of service parameters. That is, *Almgren* <u>fails</u> to teach or suggest that the claimed value for the priority level sub-parameter is established based on a QoS parameter of the <u>core network</u> and a QoS parameter of the <u>radio access network</u> associated with a type of service, i.e., mapping, by a service node of the core network, the quality of service parameters of the core network with quality of service parameters of the radio access network, the quality of service parameters of the radio access network including the Allocation/Retention Priority quality of service parameter having a priority level sub-parameter, and the mapping determining a value of the priority level sub-

parameter based on a value of the Allocation/Retention Priority quality of service parameter of the core network and a value of the quality of service parameter representative of the traffic class associated to the requested service, as recited in now-amended independent claim 8 and correspondingly recited in now amended independent claims 15 and 16. There is no teaching or suggestion in *Almgren* to modify the mapping of the "ARP" value of the core network with the sub-parameter "Priority Level" of the RAB parameter "ARP" as recited in amended claim 8 and before its transmission in the service request.

Independent claims 8, 15 and 16 <u>each</u> require the use of the Allocation/Retention Priority QoS parameter <u>of the core network</u> and the QoS parameters of the <u>radio access network</u> associated with a type of service, i.e., a combination of QoS parameters from <u>two</u> distinct networks. The cited-art <u>fails</u> to teach or suggest applicants' claimed combination of parameters for defining an order relation between RABs, and the teachings of *Sebire*, *Haumont* and *Almgren*, alone or in combination, provide the skilled person with <u>no</u> reason or motivation to modify the system of *Sebire*, based on their teachings, to achieve applicants' claimed subject matter, absent an impermissible artificial hindsight reconstruction based on applicants' own disclosure. *Sebire*, *Haumont* and/or *Almgren*, whether considered individually or in combination, thus <u>fail</u> to teach or suggest the express recitations of amended independent claims 8, 15 and 16.

By virtue of the above-discussed differences between the express recitations of amended independent claims 8, 15 and 16 and the teachings of *Sebire* in combination with *Haumont* and *Almgren*, and the lack of any clear motivation for further modifying the reference teachings to achieve applicants' claimed invention, amended independent claims 8, 15 and 16 are deemed to be patentable over the combination of *Sebire*, *Haumont* and *Almgren* under 35 U.S.C. §103.

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New Independent claim 21

New independent claim 21 includes the subject matter of independent claim 1, intervening dependent claim 13 and allowable dependent claim 14. Since dependent claim 14 was indicated to contain allowable subject matter, as noted above, new independent claim 21 is deemed to be patentable.

Patentability of Dependent Claims 11, 12, 17, 19 and 20 under 35 U.S.C. §103

The Examiner (at pgs. 9 and 10 of the Final Office Action) has acknowledged that the combination of *Sebire*, *Haumont* and *Almgren* fails to teach the subject matter recited in dependent claims 11, 12, 17 and 19, and cites *Spauling* for these features. The Examiner (at pg. 11 of the Final Office Action) has also acknowledged that the combination of *Sebire*, *Haumont* and *Almgren* fails to teach the subject matter recited in dependent claim 20, and cites *Hurme* and *Gilbert* for these features.

Applicants disagree, however, that any proper combination of *Sebire*, *Haumont*, *Almgren*, *Spauling*, *Hurme* and/or *Gilbert* achieves the subject matter of dependent claims 11, 12, 17, 19 and 20. At the very least, there is nothing in *Spauling*, *Hurme* and/or *Gilbert* to cure the above-noted deficiencies of *Sebire*, *Haumont* and *Almgren* concerning the lack of teachings of, *inter alia*, the claims 8 and 16 recited features of the priority level being defined for the requested service by a priority level sub-parameter of one of the quality of service parameters of the radio access network, where the priority level sub-parameter has a value that is determined based on an Allocation/Retention Priority quality of service parameter and a value of at least one parameter of the quality of service parameters.

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Gilbert discloses "an adaptive time division duplexing (ATDD) method and apparatus for duplexing transmissions in wireless communication systems". *Spaling* discloses a method for determining a load condition of a cell without having to measure one or more radio parameters pertaining to the cell load, e.g., interference level (see Abstract). *Hurme* discloses "a method for switching subscribers connecting to a switching apparatus providing services for the connected subscribers" (see pg. 1, lines 7-9).

Spauling, *Hurme* and *Gilbert* <u>fail</u> to teach or suggest "said mapping determining a value for said priority level sub-parameter based on an Allocation/Retention Priority quality of service parameter of the core network and a value of at least one parameter of said quality of service parameters of the radio access network associated with a type of service".

The combination of *Sebire*, *Haumont*, *Almgren*, *Spauling*, *Hurme* and/or *Gilbert* thus <u>fails</u> to teach or suggest the features and functionality expressly recited in independent claims 8 and 16, let alone in dependent claims 11, 12, 17, 19 and/or 20. Dependent claims 11, 12, 17, 19 and 20 are accordingly likewise deemed to be patentable over any proper combination of *Sebire*, *Haumont*, *Almgren*, *Spauling*, *Hurme* and *Gilbert*.

Dependent Claims

In view of the patentability of independent claims 8 and 16 for the reasons presented above, each of dependent claims 9-13 and 17-20 is deemed to be patentable therewith over the prior art. Moreover, each of these claims includes features which serve to still further distinguish the claimed invention over the applied references.

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Conclusion

Based on all of the above, applicants submit that the present application is now in full and proper condition for allowance. Prompt and favorable action to this effect, and early passage of the application to issue, are solicited.

Should the Examiner have any comments, questions, suggestions or objections, the Examiner is respectfully requested to telephone the undersigned in order to facilitate an early resolution of any outstanding issues.

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Respectfully submitted,
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Dated: July 25, 2011